

RESPONSE AND REQUEST FOR RECONSIDERATION

Support.

Support for the amounts of terephthalic acid in claims 1 and 3 is found on page 4, paragraph 0017. Support for the language on order of mixing is found on page 12, paragraph 0043. Support for the temperature range in new claims 29-31 is found on page 12, paragraph 0043. Support for the amounts of components (b)(i)+(b)(ii) in new claim 31 is found on page 6, paragraph 0025.

No other elements of the claims have been amended.

Response.

Applicants express their appreciation for the indication that the rejection set forth in the earlier office action has been overcome. However, new grounds of rejection have been set forth.

The present amendments, remarks, and attached Declaration are submitted in response to the Examiner's comment that no data had been provided in the previous declarations or in the specification relating to the actual solubility of the claimed formulations.

The present claims are limited to those formulations that contain terephthalic acid (or a salt thereof) in a restricted amount, 0.0001 to 0.1 percent by weight, and which are prepared by a particularly favorable mixing route. The amount of terephthalic acid is further limited in claims 4 and 29 to 0.001 to 0.05 percent. The presently specified mixing conditions require that the terephthalic acid be mixed with the aliphatic phosphorus ester (before the inorganic phosphorus acid is present), and thereafter combined with the inorganic phosphorus acid. Additional suggested conditions of temperature and concentrations are found in claims 29-31. Preparing a mixture by the claimed method removes or reduces the problem of insolubility or haze which is otherwise present in formulations of terephthalic acid together with, in particular, an inorganic phosphorus acid such as phosphoric acid.

The examiner had objected, in the Final Rejection, that there was no data either in the previous Declaration from Dr. Tipton or in the specification to show the actual solubility of the terephthalic acid in the claimed formulations. Such data has now been presented in the Declaration of Mr. Waters, which was submitted on August 27, 2007.

Reconsideration of this Declaration at this time is respectfully requested. At terephthalic acid concentrations of 0.0012 to 0.05 percent, Mr. Waters prepared formulations by the routes of (a) ordinary mixing, in particular, adding terephthalic acid to a lubricant formulation already containing dibutyl hydrogen phosphite and phosphoric acid (each examined at two concentrations) and (b) imparting the terephthalic acid to the same formulation by the claimed route of first mixing the terephthalic acid with the phosphorus ester and subsequently adding the phosphoric acid and the other components. The formulations prepared by the method of the present method consistently gave improved clarity and solubility. This phenomenon or improvement, incidentally, is not apparent in the absence of the inorganic phosphorus acid.

The closest reference appears to be Hotten, US 3,992,307. This reference discloses, in Sample A, column 13, a formulation of a petroleum neutral oil, a conventional succinimide dispersant, a rust inhibitor, 0.05 weight percent of terephthalic acid, and 9 millimols of zinc dihydrocarbyldithiophosphate. There is no disclosure of the presence of an inorganic phosphorus acid or a salt thereof or of an aliphatic phosphorus ester other than a zinc dialkyldithiophosphate. The reference is silent as to problems regarding solubility of the terephthalic acid. As indicated in the Declaration of Mr. Waters, this problem becomes more evident in the presence of the inorganic phosphorus acid, which was not present in the Hotten formulation. Accordingly, there is no indication in Hotten of the solution to this problem. There is no indication that the problem of insolubility (revealed as haze or sediment) can be minimized or reduced by selecting the particular mode of mixing in preparation of the lubricant formulations, as set forth in the present claims.

The Examiner's attention is also directed to the newly submitted claim 31, which more precisely focuses on the concentrations and conditions that were employed in the examples of the Declaration.

Conclusion.

For the foregoing reasons it is submitted that the present claims are novel, unobvious and in condition for allowance. The foregoing remarks are believed to be a full and complete response to the outstanding office action. Therefore an early and favorable reconsideration is respectfully requested. If the Examiner believes that only minor issues remain to be resolved, a telephone call to the Undersigned is suggested.

The total number of claims is now 24 and the number of independent claims is 3. Since originally fees for a total of 28 claims were paid, it is believed that no additional charge is required on account of the number of claims. However, any required fees or any deficiency or overpayment in fees should be charged or credited to deposit account 12-2275 (The Lubrizol Corporation).

Respectfully submitted,

/David M. Shold # 31664/

Phone: (440) 347-1601
Telefax: (440) 347-1110
j:\lg\data\patent\...\\dms0 cases\3255\us rce.doc

The Lubrizol Corporation
29400 Lakeland Blvd.
Wickliffe, OH 44092

David M. Shold
Attorney for Applicant
Reg. No. 31,664